In the Claims:

Please amend the claims as follows:

1. (currently amended) A method in connection with programming of an industrial robot, comprising teaching the robot a path having a number of waypoints located on or in the vicinity of an object to be processed by the robot, the method comprising:

obtaining information about the position of the waypoints in relation to the object,

<u>determining whether a point on the robot path is within the working range of the robot,</u> <u>and notifying the operator if the point is outside the working range of the robot,</u>

storing the information about the position of the waypoints,

simulating the robot path based on the received information about the waypoints and a model of the robot,

generating a graphical representation of the robot path based on the simulated robot path, and

displaying a view comprising the object and said graphical representation of the robot path projected on the object.

2. (previously amended) The method according to claim 1, further comprising:

obtaining information about tool orientations in the waypoints, and

generating a graphical representation of the tool orientations in the waypoints.

3. (previously amended) The method according to claim 1, further comprising:

obtaining information about the process to be performed by the robot in connection with the robot path,

simulating the result of the process based upon the obtained information about the waypoints, the obtained information about the process and a model of the process,

generating a graphical representation of the simulated result of the process, and

displaying a view showing the graphical representation of the simulated result of the process projected on the object.

4. (previously amended) The method according to claim 3, further comprising:

obtaining information about which tool to be used to perform the process and about the orientation of the tool in the way-points,

simulating the tool performing the process,

generating a graphical representation of the tool performing the process along the robot path based upon the obtained information about the position of the waypoints, the orientation of the tool, and

displaying a view showing the tool moving along the robot path performing the process, based on the generated graphical representation of the simulation of the tool performing the process.

5. (previously amended) The method according to claim 3, further comprising:

simulating the quality of the result of the process based on one or a plurality of predefined quality parameters and the model of the process,

generating a graphical representation of the quality of the result of the process, and

displaying the view based on the generated graphical representation of the simulation of the quality of the result of the process.

6. (previously amended) The method according to claim 5, further comprising:

estimating whether the quality of the result does not meet one or several quality requirements, based on said simulation of the quality of the result of the process, and

generating said graphical representation with a visual warning to the operator where the process quality is estimated not to meet the quality requirements.

7. (previously amended) The method according to claim 1, wherein the view is displayed as a function of time and it is displayed proportional to the robot movements in real-time.

8. (previously amended) The method according to claim 7, further comprising:

receiving information about a desired speed of the displaying of the view, and

displaying the view in accordance with the desired speed.

9. (cancelled)

10. (previously amended) The method according to claim 1, wherein it comprises obtaining an image of the object, registering the generated graphical representation to the image of the object to provide a composite augmented reality image and displaying said view based on the composite augmented reality image.

11. (previously amended) The method according to claim 10, wherein the image of the object is obtained by means of a camera.

12. (previously amended) The method according to claim 1, wherein the steps obtaining and storing information about the position of the waypoints in relation to the object further comprise:

obtaining information about the position of a pointing member pointing at points on or in the vicinity of the object,

determining the position of the points in relation to the object based upon said obtained information,

storing the point being presently pointed out by the pointing member as a waypoint upon receiving a recording signal.

13. (previously amended) The method according to claim 1, further comprising:

obtaining information about the position of a display member in relation to the object and displaying said view in dependence of the position of the display member in relation to the object.

14-27 (cancelled)

28. (new) A method in connection with programming of an industrial robot, comprising teaching the robot a path having a number of waypoints located on or in the vicinity of an object

to be processed by the robot, the method comprising:

obtaining information about the position of the waypoints in relation to the object;

storing the information about the position of the waypoints;

simulating the robot path based on the received information about the waypoints and a model of the robot;

generating a graphical representation of the robot path based on the simulated robot path;

displaying a view comprising the object and said graphical representation of the robot path projected on the object;

obtaining information about a process to be performed by the robot in connection with the robot path;

simulating the result of the process based upon the obtained information about the waypoints, the obtained information about the process and a model of the process;

generating a graphical representation of the simulated result of the process;

displaying a view showing the graphical representation of the simulated result of the process projected on the object.;

simulating the quality of the result of the process based on one or a plurality of predefined quality parameters and the model of the process;

generating a graphical representation of the quality of the result of the process; and

displaying the view based on the generated graphical representation of the simulation of the quality of the result of the process.

29. (new) The method according to claim 28, further comprising:

estimating whether the quality of the result does not meet one or several quality

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requirements, based on said simulation of the quality of the result of the process, and

generating said graphical representation with a visual warning to the operator where the process quality is estimated not to meet the quality requirements.

30. (new) A method in connection with programming of an industrial robot, comprising teaching the robot a path having a number of waypoints located on or in the vicinity of an object to be processed by the robot, the method comprising:

obtaining information about the position of the waypoints in relation to the object;

storing the information about the position of the waypoints;

simulating the robot path based on the received information about the waypoints and a model of the robot;

generating a graphical representation of the robot path based on the simulated robot path;

displaying a view comprising the object and said graphical representation of the robot path projected on the object; and

obtaining information about the position of a display member in relation to the object and displaying said view in dependence of the position of the display member in relation to the object